

9. A surface acoustic wave device comprising:
a quartz substrate;
a piezoelectric thin film disposed on said quartz substrate;
comb electrodes disposed between said quartz substrate and said piezoelectric thin film; and

the normalized film thickness H/λ of said piezoelectric thin film is at least about 0.20, wherein the film thickness of said piezoelectric thin film is H , and the wavelength of a surface acoustic wave is λ ; wherein

the Euler angles of said quartz substrate are within the range such that the power flow angle PFA of a Rayleigh wave is within about $\pm 2.5^\circ$; and

the Euler angles of said quartz substrate are within the range such that the electromechanical coupling coefficient for a spurious wave K_{sp}^2 is not larger than about 0.1%.

Please cancel claim 2 without prejudice or disclaimer of the subject matter contained therein.

Please add the following new claim 14:

14. A surface acoustic wave device, comprising:
a quartz substrate;
a piezoelectric thin film disposed on said quartz substrate;
comb electrodes disposed between said quartz substrate and said piezoelectric thin film; and

the normalized film thickness H/λ of said piezoelectric thin film is at least about 0.20, wherein the film thickness of said piezoelectric thin film is H , and the wavelength of a surface acoustic wave is λ ; wherein

the Euler angles of said quartz substrate are within a range such that the power flow angle PFA of a Rayleigh wave is within about $\pm 2.5^\circ$;

Serial No. 09/840,359

November 1, 2002

Page 3

said range of the Euler angles set such that the PFA is within about $\pm 2.5^\circ$ is within an area surrounded by lines which are represented by the following equations:

$$\theta = 201.77292 - 8.1909\psi + 0.3257\psi^2 - 0.00532\psi^3 + 0.0000286691\psi^4 \text{ and } 3 \leq \psi \leq 40;$$

$$\theta = -2.3333\psi + 221.33 \text{ and } 40 \leq \psi \leq 43;$$

$$\theta = -20.667\psi + 1009.7 \text{ and } 43 \leq \psi \leq 44.5;$$

$$\psi = 242.92932 - 2.46296\theta - 0.04285\theta^2 + 0.000792121\theta^3 - 0.00000316309\theta^4 \text{ and } 60 \leq \psi \leq 106;$$

$$\theta = 60 \text{ and } 28 \leq \psi \leq 70;$$

$$\theta = 1.39744\psi^2 - 78.37179\psi + 1158.8 \text{ and } 27.5 \leq \psi \leq 32;$$

$$\theta = 9.8429 + 15.55204\psi - 1.0153\psi^2 + 0.0306\psi^3 - 0.00038175\psi^4 \text{ and } 3 \leq \psi \leq 32;$$

$$\theta = 60 \text{ and } 0 \leq \psi \leq 4;$$

$$\psi = 0 \text{ and } 60 \leq \theta \leq 180;$$

$$\theta = 180 \text{ and } 0 \leq \psi \leq 4; \text{ and}$$

the Euler angles of said quartz substrate are within a range such that the electromechanical coupling coefficient for a spurious wave, K_{sp}^2 is not larger than about 0.05%;

said range of the Euler angles set such that K_{sp}^2 is not larger than about 0.05% is within an area surrounded by lines which are represented by the following equations:

$$\theta = 461.5 - 51.23992\psi + 3.55894\psi^2 - 0.12153\psi^3 + 0.00171\psi^4 \text{ and } 12 \leq \psi \leq 25.5;$$

$$\theta = -10\psi + 425 \text{ and } 24 \leq \psi \leq 25.5;$$

$$\theta = -88.97104 + 38.79904\psi - 1.80561\psi^2 + 0.03334\psi^3 - 0.000217323\psi^4 \text{ and } 27 \leq \psi \leq 43;$$

$$\theta = -0.013928594\psi^4 + 2.255507173\psi^3 - 136.803833233\psi^2 + 3684.063042727\psi - 37024.00 \text{ and } 33 \leq \psi \leq 43;$$

$$\theta = 0.0009461088154\psi^4 - 0.178399621211\psi^3 + 12.5950972795403\psi^2 - 395.999782194768\psi + 4763.57 \text{ and } 33 \leq \psi \leq 55;$$

Serial No. 09/840,359
November 1, 2002
Page 4

$\theta=60$ and $29 \leq \psi \leq 55$;

$\theta=0.01724063*\psi^3-1.20723413*\psi^2+24.63357158*\psi-58$ and $16 \leq \psi \leq 30$;

$\theta=0.0139*\psi^2+0.9028*\psi+79$ and $79 \leq \psi \leq 100$;

$\psi=0$ and $78 \leq \theta \leq 180$;

$\theta=180$ and $0 \leq \psi \leq 13$;

$\theta=180$ and $24 \leq \psi \leq 29$.

A3
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